National Fish and Wildlife Foundation

2006 Coral Reef Conservation Fund Recipients

Pacific Projects:

Enhancing Makai Watch Coral Conservation (HI), *Community Conservation Network*
Coral Reef Areas near Big Island and Kauai Island, Hawaii
Coral Reef Conservation Fund Grant: $50,000; Partner Contributions: $100,000

Makai Watch partners with community volunteers to improve management of coral reefs in Hawaii through education and outreach, observation and compliance, and biological and human use monitoring. The Community Conservation Network (CCN) will continue to develop at least five already-established Makai Watch programs and establish new programs in three additional communities. In this project, CCN will work with local citizens to present awareness-raising materials at coral reef areas, as well as collect data on population abundance of key coral reef species and human use of marine resources. Additionally, volunteers will patrol areas to reduce resource violations, develop and implement Makai Watch institutional and financial sustainability plans, and hold workshops and trainings to exchange Makai Watch skills and lessons learned. Past work has resulted in strong community involvement in Makai Watch programs and support for coral reef protection. Partners include the Division of Land and Natural Resources, The Nature Conservancy and Hawaii Wildlife Fund.

Talking Trash in Majuro, *Marshall Islands Conservation Society*
Majuro, Marshall Islands
Coral Reef Conservation Fund Grant: $37,102; Partner Contributions: $77,638

Marshall Islands Conservation Society (MICS) will work with volunteers and partners, focusing on youth and women, to reduce the high levels of solid waste on offshore coral reefs and in the waters of Majuro Atoll. In this pilot program, MICS and partners will arrange community meetings and conduct door-to-door discussions to raise residents' awareness about trash disposal and encourage use of public dumpsters. MICS will work directly through the Chamber of Commerce, and with importers and retailers, to replace plastic materials with biodegradable cardboard containers. Fliers, posters, videos, newspaper articles and billboards will aid community awareness building to reduce trash dumping. Beach and underwater surveys will be conducted with students and teachers before and after project implementation to assess the effectiveness of this pilot program. Partners include Youth-to-Youth-in-Health, Women United Together in Marshall Islands and the College of Marshall Islands.

Pride Campaign for Coral Conservation in Micronesia, *Rare*
Kosrae, Federated States of Micronesia
Coral Reef Conservation Fund Grant: $100,000; Partner Contributions: $200,000

Rare will conduct a Pride conservation education campaign to build a constituency around coral conservation in the Federated States of Micronesia. Rare Pride campaigns are intensive, 18-month social marketing programs that effectively promote conservation in critical ecosystems. By using a charismatic, flagship species to become a symbol of local pride, the symbol can then serve as a messenger to build support for habitat and wildlife protection. Marketing techniques such as billboards, posters, songs, music videos, sermons, comic books and puppet shows engage the community to influence attitudes and behavior. Partners include Micronesia Conservation Trust and the Kosrae Conservation and Safety Organization.

Grouper Spawning and Rearing Assessment, *The Nature Conservancy*
Manus Islands, Papua New Guinea
Coral Reef Conservation Fund Grant: $50,000; Partner Contributions: $62,500

The Nature Conservancy (TNC) will use barium isotopes to examine the connectivity between spawning and nursery areas of grouper in Melanesia. Data from tagged groupers will be collected and analyzed to determine the connectivity between spawning and nursery areas to appropriately design a Marine Protected Area and to determine whether closing spawning areas would provide direct benefits to the fishers who depend on grouper as a resource. Data collected will inform regional management strategies and wider Marine Protected Area network design protocols and will be used to benefit the local Titan communities. Other partners include provincial and national fisheries departments, James Cook University and the Woods Hole Oceanographic Institute.

Capacity for Marine Conservation in Micronesia II, *Micronesia Conservation Trust*
Kosrae, Pohnpei, Chuuk, and Yap, Federated States of Micronesia
Coral Reef Conservation Fund Grant: $52,164; Partner Contributions: $89,836

Micronesia Conservation Trust (MCT) will grant $90,000 to non-governmental organizations in the Federated States of Micronesia (FSM) to conduct marine conservation projects and develop Marine Protected Area management plans, according to priorities outlined in the FSM National Biodiversity Strategy and Action Plan. A technical committee of local scientists and community development experts will help select six management plan development and implementation projects. MCT will conduct capacity-building activities through workshops and individual visits to assist in the implementation of the plans. Partners include the Conservation Society of Pohnpei and state and local government officials.

Coral Reef Pollution Reduction in A.S., *The Coalition of Reef Lovers – American Samoa*
Four Coastal Villages on Tutuila Island, American Samoa
Coral Reef Conservation Fund Grant: $34,612; Partner Contributions: $75,468

The Coalition of Reef Lovers (CORL) will work with four communities, Alofau, Maloata, Amaua and Auto, to address pollution affecting local coral reef flats, coral fringe reefs and Turtle grass bed areas. CORL aims to locate and identify sources of pollution causing algae blooms in the communities' watersheds, raise community awareness of these problems, and instigate action and support to correct those problems. In the long term, CORL aims to reduce threats to and restore coral reef, mangrove and turtle grass habitats. CORL will conduct testing and monitoring in watershed and coastal areas using Stressed Stream Analysis. Awareness workshops will be held in each village, information on household sewage disposal will be gathered through community surveys and community members will participate in several stream and coastal cleanup events. CORL will create and widely broadcast videos to inform the public of the local threats to coral habitat. Results from water testing will be presented to key agencies to solve problems causing loss of coral reef habitats. Project partners include the American Samoa Environmental Protection Agency, the American Samoa Community College and members of the American Samoa Coral Reef Action Group (CRAG).

Evaluating Fish Nursery Habitat for MPAs, *San Diego State University Research Foundation*
Hawaii Island and Midway Atoll
Coral Reef Conservation Fund Grant: $23,891; Partner Contributions: $49,473

San Diego State University Research Foundation will conduct field surveys and compile data on recently settled juvenile fish to determine habitat use and their associations with other individuals and species surrounding the Hawaiian Islands. This information is necessary to determine whether Marine Protected Areas (MPAs) are effective nursery areas to replenish fish populations in non-reserve areas. San Diego State University Research Foundation will identify which corals and other highly structured habitats provide key nursery resources for juvenile habitats. Those that are especially important include where piscivorous fishes (the predators of recruits) are abundant to better inform MPA design in the Hawaiian Archipelago and potentially elsewhere. This project addresses a National Fish and Wildlife Foundation conservation priority: increase the management effectiveness of coral habitat and MPAs and to identify critical habitat areas under the Coral Reef Initiative. Results will be presented to key federal and state agencies. Partners include the University of Hawaii, National Marine Fisheries Service and the Oceanic Institute in Hawaii.

Coral Reef Fish Rehabilitation in the Philippines, *Reef Check*
Tubigon, Bohol, Philippines
Coral Reef Conservation Fund Grant: $50,568; Partner Contributions: $105,610

Reef Check will work with the local-level municipal government in Tubigon to rehabilitate depleted fish populations. Reef Check will collect 12,000 post-larval planktonic fish, representing at least 50 different species from the municipal waters of Tubigon, using a harmless light trap collection technique. A land-based aquaculture facility will be established to rear the fish to a larger size past their highest mortality stage, and approximately 10,000 fish will be to be restocked in the wild. Restocking parameters will be developed based on tests to determine optimal fish size, season and location to most successfully reintroduce the fish to the reef. Technicians and fishermen will be trained on collection, sorting, feeding and restocking activities during this project. Furthermore, technical manuals will be prepared and distributed, a publication on project results will be submitted to a scientific journal and a presentation on how to use rehabilitation technology will be prepared for an international workshop.

Sustainable Management at Helen Reef, *Community Conservation Network*
Helen Reef Atoll, Palau, Micronesia
Coral Reef Conservation Fund Grant: $22,500; Partner Contributions: $22,680

Community Conservation Network (CCN) will train field staff and work with local and regional experts to design Marine Protected Area regulations, as well as better control, monitor and reduce human impact on Helen Reef. CCN will send leading field officers to the Palau International Coral Reef Center to be trained in advanced biological monitoring methods. These staff will then train at least ten Hatohobei community members to carry out biological and socio-economic monitoring. Information collected will contribute to long-term adaptive management planning. This project will also provide community education through meetings and presentations to tourists and community members. Buoys will be placed to clearly mark open and closed fishing areas surrounding Helen Reef. Stronger regulation enforcement will help reduce negative impact on marine habitat by reducing violations, overexploitation of resources and light pollution. Finally, CCN will install two sets of mooring buoys in the Helen lagoon to eliminate anchor impact to local coral.

Caribbean/ Mesoamerican Projects:

Linking Herbivory to Reef Resilience, *University of Maine*
Glover's Reef Research Station, Belize; Bonaire, Netherland Antilles Bonaire National Marine Park
Coral Reef Conservation Fund Grant: $ 49,891; Partner Contributions: $ 98,315

The University of Maine will study the resilience of coral reefs by investigating whether herbivory is a major driving factor of coral recruitment. This theory will be tested in two ecologically diverse areas: Belize, where fish abundance is poor; and Bonaire, where fish abundance is high, to determine the extent local fish abundance effects coral reef health. The results will then be presented to appropriate management officials in each location to inform them about the link between the conservation of reef fish and the health of the reefs.

Exuma Land and Sea Park Mooring Project, Bahamas, *Bahamas National Trust*
Exuma Cays Land and Sea Park, Exuma, Bahamas
Coral Reef Conservation Fund Grant: $ 50,000; Partner Contributions: $ 130,000

The Bahamas National Trust will install 100 moorings in the Exuma Cays Land and Sea Park. The Exuma Cays Land and Sea Park was established in 1959 and declared a “no-take zone” in 1987. It now has some of the highest concentrations of fish, conch and lobsters in the greater Caribbean region and contains large, intact coral reefs and seagrass beds. The installment of moorings in this park will protect these seagrass beds and coral reefs from anchor damage and help this area achieve more sustainable usage patterns by the estimated 20,000 tourists who visit this area each year. To further increase the sustainability of this park, the Bahamas National Trust will also establish a comprehensive visitor education program including printed materials about the new moorings, their locations, proper mooring techniques and how to enjoy the park with minimum impact. The moorings will also generate some funds for long term resource management.

Mesoamerican Reef Cruise Tourism Impact Reduction, *Conservation International Foundation*
Isla Cozumel, Caribbean coast of the Yucatan Peninsula, Mexico
Coral Reef Conservation Fund Grant: $ 50,000; Partner Contributions: $ 83,628

Conservation International Foundation will work with cruise lines, local government and shore operators to develop a cruise-passenger management plan that minimizes cruise-tourism-related damage to Cozumel's coastal and marine habitat. Cruise ships bring millions of passengers each year to some of the Mesoamerican Reef's most sensitive ecosystems. These destinations, however, often lack the management and infrastructure needed to prevent these visitors from degrading the coastal and marine ecosystems. To address these challenges, Conservation International Foundation will coordinate meetings and workshops with stakeholder groups, including the cruise lines, local government, shore operators and civil society, to develop ways to protect the natural resources that make these cruise destinations so attractive.

Good Mate/Clean Marinas in Simpson Lagoon, *Environmental Protection in the Caribbean*
Simpson Lagoon, St. Martin
Coral Reef Conservation Fund Grant: $ 21,000; Partner Contributions: $ 47,800

The Love the Lagoon project addresses significant pollution problems in an ecologically unique and economically important Caribbean watershed through marina and boater participation. The project will build partnerships within the yachting community and marina management to increase awareness of the ecological importance and health of the lagoon. Furthermore, action will be taken to improve water quality through the Good Mate Program. Project objectives also include the certification of two Clean Marinas and building public support for environmental protection of Simpson Lagoon through media campaigns and outreach. Water quality in the lagoon will be monitored for coliform, salinity, water clarity and heavy metals, and results will be published in local newspapers.

Multi-stakeholder Management Plan for Sosua Marine Park, *Counterpart International, Inc.*
Sosua National Marine Park, Dominican Republic
Coral Reef Conservation Fund Grant: $ 34,695; Partner Contributions: $ 41,345

Counterpart International, Inc. will facilitate the development of a coral reef management plan for Sosua National Marine Park in the Dominican Republic, involving the fishermen and the tourism industries, while building capacity in the local non-governmental organization (NGO) responsible for management. This new approach to managing national parks in the Dominican Republic, which establishes the right of an NGO to set, collect and utilize user fees for the park, offers hope for future funding and sustainability. The success or failure of this new park will have major ramifications for biodiversity conservation throughout the country, bringing long-term positive impacts to the coral reefs and coastal areas should the model succeed.

Coral Reef Sustainable Destination Program-Cozumel, *Coral Reef Alliance*
Cozumel Island, Mexico, including the Cozumel National Marine Park
Coral Reef Conservation Fund Grant: $ 37,291; Partner Contributions: $ 39,293

The Coral Reef Alliance will catalyze partnerships between Marine Protected Area (MPA) managers, tourism industry and non-governmental organizations to reduce impacts to coral reefs, build MPA management capacity and foster the sustainability of the destination of Cozumel. Cozumel represents one of the most economically valuable regions for marine tourism in Mesoamerica. The area has witnessed the decline of its reefs from intensive coastal development, sedimentation and sewage output, pollution, poorly conducted marine recreation activities and the rapid growth of cruise tourism. Established in 1990, Cozumel National Marine Park has begun to mitigate impacts; however, the MPA lacks the necessary staffing and infrastructure, financial resources and industry support to effectively carry out its mandate of coral reef protection.

Coral Reef and Seagrass Conservation in Guatemala's MPA, *Fundacion Mario Dary Rivera*
Marine Protected Area Punta de Manabique, Amatique Bay and Gulf of Honduras, Guatamala
Coral Reef Conservation Fund Grant: $ 48,897; Partner Contributions: $ 61,900

The Fundacion Mario Dary Rivera will implement a mooring and demarcation buoy program in Marine Protected Area (MPA) Punta de Manabique off Guatemala's Atlantic coast, thereby decreasing anchoring damage to coral and seagrass beds and promoting sustainable fisheries. The MPA Punta de Manabique is part of the Mesoamerican Barrier Reef System, a priority site of the Tulum Convention, with 60% of its area being marine ecosystems that include coral reefs, seagrass beds and mangrove forests. Punta de Manabique was recognized as a RAMSAR site in 2000 and furthermore, became the only marine protected

area in Guatemala in 2005. This pristine area is considered a biocorridor of marine fauna, such as whale sharks and four species of marine turtles in the Gulf of Honduras. It is also characterized by a highly unique biodiversity in the coral reef patches and surrounding seagrass beds and mangrove forests.

Establishment of a Marine Protected Area on Andros Island, *The Nature Conservancy*
Andros Island, Bahamas
Coral Reef Conservation Fund Grant: $ 46,830; Partner Contributions: $ 88,400

The Nature Conservancy will identify critical areas of corals and associated back reef ecosystems on Andros Island through an assessment of biodiversity and stressors, and will conduct a stakeholder assessment to promote the establishment of a new marine protected area (MPA). The project will work to strengthen capacity for marine ecosystems management through resource management training and the development of a management plan. This includes augmenting The Bahamas National Trust's capacity by establishing a core management planning team, conducting a series of workshops on park management and providing opportunities for key stakeholders and future park managers to visit other places in the region with functioning MPA's.

Pedro Bank Coral Reef, Wildlife & Fisheries Management, *The Nature Conservancy*
Pedro Cays, Jamaica
Coral Reef Conservation Fund Grant: $ 55,000; Partner Contributions: $ 128,392

The Nature Conservancy will work collaboratively with key stakeholders to establish and begin implementation of sustainable fisheries and biodiversity management plans for the wildlife and coral reefs of the Pedro Cays. Strategies to obtain this goal include: conservation zoning and enforcement methods to reduce the impacts of fishing pressure while increasing biodiversity, and collaboratively developing and testing practical and acceptable approaches to waste disposal, housing and human welfare. The project will also target fishing communities by improving capacity of fishers to act as stewards of the natural resources, and exploring diversification of fishing practices and innovative fishing activities towards reducing fishing pressure and improving economic benefits. A monitoring program will be implemented to measure the impact of these conservation measures.

Ensuring the Effective Management of East End Marine Park, *The Ocean Conservancy*
East End Marine Park, St. Croix
Coral Reef Conservation Fund Grant: $ 49,992; Partner Contributions: $ 143,272

The Ocean Conservancy will ensure strong, effective and adaptive management of St. Croix's East End Marine Park (EEMP) through the use of the National Oceanic and Atmospheric Administration-The International Union for the Conservation of Nature and Natural Resources-World Wildlife Fund methodology to select indicators, engage community and develop a monitoring plan. The EEMP is of critical importance to the conservation of marine habitats in the U.S. Virgin Island (USVI), primarily because it serves as the focal point for the USVI government's Local Action Strategies development efforts. As the flagship program in this effort, the EEMP will take center stage in territorial coastal management efforts guiding Marine Protected Area (MPA) development. Eventually, it will set a model for the establishment and management of a system of functionally interrelated MPAs, which will all work together to ensure the highest level of protection for USVI's coral reef resources.

Coral Reef Nursery and Reef Restoration, Miami FL, *University of Miami*
Biscayne National Park, Miami-Dade County, Florida
Coral Reef Conservation Fund Grant: $ 28,120; Partner Contributions: $ 28,211

The University of Miami will develop a volunteer and student operated coral nursery, salvaging damaged coral for propagation to be used for coral reef restoration and enhancement in the Florida coral reef system. This project plans to rescue damaged coral fragments at ship-grounding sites within Biscayne National Park, which are too small to be reattached in the field and establish them in the nurseries. A goal of this project is to eventually provide a continuous source of reproductively mature corals that can be used for restoration of reefs damaged by groundings, as well as enhancing reefs having low live coral cover. This project will also provide increased community participation in coral reef management through active involvement in coral culture activities in the field nurseries and laboratory environments. Furthermore, it will give University of Miami marine science students field and laboratory experiences, as well as the opportunity to be involved in marine conservation and local community activities.

Coral Reef Education and Sustainable Tourism Development, *Caribbean Student Environmental Alliance*
Banda Abou district on the west end of Curacao
Coral Reef Conservation Fund Grant: $ 47,800; Partner Contributions: $ 76,750

The Caribbean Student Environmental Alliance will provide Banda Abou, Curacao with environmental education and sustainable tourism programs to help them protect their coral reef, while extending coral reef education via teacher training. The goal is to raise community awareness so that native Curacaoans are the strongest advocates for protecting their own coral reefs. This project will also train teachers from all of Curacao's schools to better understand their precious natural resource, the coral reef, and provide them with curriculum materials to use in the classroom.

Information Sharing on Mesoamerican Coral Reefs, *Rainforest Alliance, Inc.*
Mesoamerica
Coral Reef Conservation Fund Grant: $ 30,000; Partner Contributions: $ 30,000

The Rainforest Alliance, Inc. will create Eco-Index, an online database and environmental magazine featuring conservation projects throughout the Neotropics, allowing non-governmental organizations and researchers to share information and learn from each other. By coordinating the Eco-Index, the Rainforest Alliance, Inc. hopes to prevent unplanned duplication of research efforts. This will be done by providing groups working in coral reef conservation with an efficient way to share information in English and Spanish, including lessons learned, tools and studies they have gathered. The Eco-Index will also establish a permanent archive of coral reef conservation efforts in the Neotropics accessible to the public, improving their understanding of and support for coral reef conservation in the region.

Erosion Control Strategies for the Fish Bay Waters, *Island Resources Foundation*.
Fish Bay Watershed on St. John, USVI; the watershed is adjacent to the Virgin Islands National Park
Coral Reef Conservation Fund Grant: $ 41,233; Partner Contributions: $ 49,532

The Island Resources Foundation will implement and evaluate an erosion control strategy in the 6 km^2 Fish Bay watershed on St. John, U.S. Virgin Islands. Development of the Fish Bay watershed has resulted in increasing levels of hillside erosion and siltation of the 88 acres of corals at the mouth of Fish Bay, which is immediately adjacent to the Virgin Islands National Park. These corals are some of the only remaining live corals in the area that have survived the extraordinary 2005 coral bleaching event. The project will improve the condition of coral reefs and seagrass beds in Fish Bay by reducing sediment loads through the application of erosion control Best Management Practices on the Fish Bay watershed.

Saba National Marine Park: Protection of Coral Reefs, *Saba Conservation Foundation*
Saba, Netherlands Antilles
Coral Reef Conservation Fund Grant: $ 33,000; Partner Contributions: $ 85,000

The Saba Conservation Foundation will implement a mooring buoy management plan for Saba National Marine Park. The project will conduct ongoing management of mooring systems to prevent damage to coral reefs, build capacity for mooring installation/ maintenance and develop user information and education programs. The use of moorings will decrease anchor damage to the coral reefs and benthic communities of the Park, as well as provide a means to generate income for the Saba National Marine Park to further support conservation efforts.

Socio-economic Training and Monitoring in the MAR, *World Wildlife Fund*
Honduras, MNM Archipielago Cayos Cochinos/ RVS Cuero y Salado; in Guatemala, RVS Punta de Manabique
Coral Reef Conservation Fund Grant: $ 23,115; Partner Contributions:$ 23,115

The World Wildlife Fund (WWF) will promote regional socio-economic training and monitoring of coral reef management to increase the effectiveness in three marine protected areas in Honduras and Guatemala, on the Mesoamerican Reef. To carry-out this goal, the WWF will promote sustainable resource management alternatives to reduce threats to these protected areas, facilitate stakeholder's involvement by gaining a greater understanding of community perceptions and needs, and strengthen the capacity of these communities to conserve their natural resources. The WWF plans to implement the Global Socioeconomic Monitoring Initiative for Coastal Management, which has been developed by the National Oceanic and Atmospheric Administration in partnership with several global and regional organizations.